WE CLAIM:

1. A method for selecting a track density for a disk surface of a disk drive, the disk drive comprising a disk including the disk surface and a head actuated over the disk surface, the method comprising the steps of:

(a) writing a first pattern along a first circumferential path of the disk surface, wherein the first circumferential path comprises a first set of arcuate sections interleaved with a second set of arcuate sections;

(b) writing a second pattern along a second circumferential path during time intervals corresponding to the first set of arcuate sections, wherein the second circumferential path is radially offset from the first circumferential path;

(c) positioning the head substantially over the center of the first circumferential path and:

during time intervals corresponding to the second set of arcuate sections, reading the first pattern to generate a first read signal amplitude measurement A0; and

during time intervals corresponding to the first set of arcuate sections, reading the first pattern to generate a second read signal amplitude measurement A1; and

(d) selecting a track density in response to A0 and A1, wherein the track density is for use in writing embedded servo sectors to the disk surface.

2. The method as recited in claim 1, further comprising the step of locating the center of the first circumferential path prior to the steps of reading the first pattern to generate the first and second read signal amplitude measurements A0 and A1, wherein the step of locating the center of the first circumferential path comprises the steps of:

(a) iteratively positioning the head at different locations with respect to the first circumferential path and reading the first pattern; and

(b) selecting as the center of the first circumferential path the head position that maximizes the read signal amplitude.

3. The method as recited in claim 1, wherein the track density is selected in response to a ratio of A1 to A0.

4. The method as recited in claim 1, wherein the first pattern comprises a first fundamental frequency and the second pattern comprises a second fundamental frequency substantially different than the first fundamental frequency.

5. The method as recited in claim 4, wherein the first pattern writes a predetermined pattern of magnetic transitions on the disk surface and the second pattern writes a DC erase signal to the disk surface.

6. The method as recited in claim 1, wherein prior to the step of positioning the head substantially over the center of the first circumferential path and reading the first pattern to generate the first and second read signal amplitude measurement A0 and A1, further comprising the step of positioning the head substantially over a center of a third circumferential path and writing the second pattern along the third circumferential path during time intervals corresponding to the first set of arcuate sections, wherein:

(a) the second circumferential path is radially offset in a first direction from the first circumferential path;

(b) the third circumferential path is radially offset in a second direction from the first circumferential path; and

(c) the first direction is substantially opposite the second direction.